1 Claims 2 1. A processor for electronic trading of financial instruments comprising: 3 (a) a receiver for information messages from market participants that bid for purchase or offer for sale of a financial instrument, said receiver time-stamping received 4 5 information messages; 6 (b) an electronic order book; 7 (c) an updater communicating with said receiver and said electronic order book 8 for qualifying and parsing price, size and time-stamp bid or offer data from information 9 messages received on said receiver and entering said parsed data on said electronic order 10 book with priority tracked by instrument in price and time-stamp of a received and 11 qualified message; 12 (d) a transmitter communicating with said electronic order book for display to 13 market participants anonymous data entered on said electronic order book; 14 (e) a price improvement period timer communicating with said updater (i) 15 initiated upon receipt by said receiver of an information message from a qualified market 16 participant containing a bid or offer at or better than a preset price improvement over the 17 best bid or offer prevailing across multiple markets for a particular instrument and (ii) 18 terminated upon an elapsing of a preset price improvement period time less than a minute 19 and commensurate with market risk; and 20 (f) a transaction executor communicating with said price improvement period 21 timer and said electronic order book for allocating and executing upon said termination 22 matches of bids or offers for said particular instrument, data for which are entered on said 23 electronic order book, against market offers or bids in said order, subject to a partial time

- 1 priority for said qualified market participant, and updating said electronic order book
- 2 accordingly.
- 3 2. The processor of Claim 1 wherein said best bid or offer prevailing across multiple
- 4 markets is the best bid or offer on a national market.
- 5 3. The processor of Claim 2 wherein said preset price improvement and increments in
- 6 subsequent bids or offers during said price improvement are finer increments than those
- 7 reported for best bids and offers on said national market.
- 8 4. The processor of Claim 2 wherein said preset price improvement period is three
- 9 seconds.
- 10 5. The processor of Claim 2 wherein said qualified market participant is a non-market-
- 11 maker broker-dealer and said qualified market participant receives time priority for forty
- 12 percent by size of any remaining allocation at said qualified market participant's best
- 13 price.
- 14 6. The processor of Claim 5 wherein a market maker bidding or offering at the national
- best bid or offer at the commencement of said price improvement period receives time
- priority for one-third by size of any remaining allocation at said qualified market
- 17 participant's best price after said qualified market participant's allocation at that or better
- 18 price.
- 19 7. A processor for automatic trading of equity option contracts comprising:
- 20 (a) a receiver for information messages from market participants that order bids
- 21 for purchase or offers for sale of an equity option contract, said receiver time-stamping
- 22 received information messages;
- 23 (b) an electronic order book;

1 (c) an updater communicating with said receiver and said electronic order book 2 for qualifying and parsing price, size and time-stamp bid or offer data from information 3 messages received on said receiver and entering said parsed data on said electronic order 4 book with priority tracked by equity option contract in price and time-stamp of a received 5 and qualified message; 6 (d) a transmitter communicating with said electronic order book for display to 7 market participants anonymous data entered on said electronic order book; 8 (e) a price improvement period timer communicating with said updater (i) 9 initiated upon receipt by said receiver of an information message from a qualified market 10 participant containing a bid or offer at or better than a preset price improvement over the 11 national best bid or offer for a particular equity option contract and (ii) terminated upon 12 an elapsing of a preset price improvement period time of greater than zero and less than 13 ten seconds; and 14 (f) a transaction executor communicating with said price improvement period 15 timer and said electronic order book for allocating and executing upon said termination 16 matches of bids and offers for said particular equity option contact, data for which are 17 entered on said electronic order book, against market offers or bids in said order, subject 18 to a partial time priority for said qualified market participant, and updating said electronic 19 order book accordingly. 20 8. The processor of Claim 7 wherein said qualified market participant is an order flow 21 provider and said order flow provider receives time priority for forty percent by size of 22 any remaining allocation at said order flow provider's best price.

1 9. The processor of Claim 8 wherein a market maker bidding or offering at the national 2 best bid or offer at the commencement of said price improvement period receives time 3 priority for one-third by size of any remaining allocation at said order flow provider's 4 best price after said order flow provider's allocation at that or better price. 5 10. A computer program product for conducting a fast price improvement auction of 6 financial instruments traded across national markets, said computer program product 7 residing on a computer-readable medium comprising instructions for causing a computer 8 to: receive an order an order specifying the commencement of a price-improvement 9 auction with better price than the prevailing price across national markets, commence and 10 conduct an auction with a time duration of greater than zero and less than ten seconds 11 where bids or offers are matched with contra market orders or bids according to an 12 allocation at the best price first and within each price level by time of receipt, with a 13 share of any allocation at the best price level received from a market participant 14 commencing said price-improvement auction reserved to said market participant. 15 11. A process for electronic trading of financial instruments comprising the steps of: 16 (a) receiving an information message that bids for purchase of or offers for sale a 17 financial instrument; 18 (b) entering on an electronic order book data parsed from said information 19 message where said information message bids for purchase of or offers for sale a 20 financial instrument at price at or better than a preset price improvement over the best 21 national bid or offer; 22 (c) initiating a price improvement period timer upon receipt of the first said bid or

offer at or better than said preset price improvement;

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- 1 (d) receiving and information messages and entering according to steps (a) and (b)
 2 until the elapsing of a preset price improvement period time;
- 3 (e) allocating and executing, upon the said elapsing of said preset price
- 4 improvement period time, matches of bids or offers for a particular equity option
- 5 contract, data for which are entered on said electronic order book, in order of best bids or
- 6 offers and earliest time of receipt at each price level, against market offers or bids,
- 7 subject to a partial time priority for a qualified market participant from whom was
- 8 received said information message initiating said price improvement period timer.
- 9 12. The process of Claim 11 wherein said best bid or offer prevailing across multiple
- markets is the best bid or offer on a national market.
- 11 13. The process of Claim 12 wherein said preset price improvement and increments in
- subsequent bids or offers during steps (a) and (b) are finer increments than those
- reported for best bids and offers on said national market.
- 14 14. The process of Claim 13 wherein said preset price improvement period is three
- seconds.
- 15. The processor of Claim 12 wherein said qualified market participant is a non-market-
- maker broker-dealer and said qualified market participant receives time priority for forty
- percent by size of any remaining allocation at said qualified market participant's best
- 19 price
- 20 16. The process of Claim 15 wherein a market maker bidding or offering at the national
- 21 best bid or offer at the commencement of said price improvement period receives time
- 22 priority for one-third by size of any remaining allocation at said qualified market

- 1 participant's best price after said qualified market participant's allocation at that or better
- 2 price.

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- 3 17. A process for automatic trading of equity option contracts comprising:
- 4 (a) receiving an information message that bids for purchase of or offers for sale an 5 equity option contract;
- (b) entering on an electronic order book data parsed from said information
 message where said information message bids for purchase of or offers for sale an equity
 option contract at price at or better than a preset price improvement over a bid or offer
 prevailing on a national market;
- 10 (c) initiating a price improvement period timer upon receipt of the first said bid or 11 offer at or better than said preset price improvement;
- (d) receiving and information messages and entering according to steps (a) and (b)
 until the elapsing of a preset price improvement period time of greater than zero and less
 than ten seconds;
 - (e) allocating and executing, upon the said elapsing of said preset price improvement period time, matches of bids or offers for a particular equity option contract data for which are entered on said electronic order book, in order of best bids or offers and earliest time of receipt at each price level, against market offers or bids, subject to a partial time priority for a qualified market participant from whom was received said information message initiating said price improvement period timer.
- 18. The process of Claim 17 wherein said qualified market participant is an order flow provider and said order flow provider receives time priority for forty percent by size of any remaining allocation at said order flow provider's best price.

- 1 19. The process of Claim 18 wherein a market maker bidding or offering at the national
- 2 best bid or offer at the commencement of said price improvement period receives time
- 3 priority for one-third by size of any remaining allocation at said order flow provider's
- 4 best price after said order flow provider's allocation at that or better price.
- 5 20. A method for conducting a fast price improvement auction of financial instruments
- 6 traded across national markets comprising the steps of: receiving an order an order from a
- 7 qualified market participant specifying the commencement of a price-improvement
- 8 auction with better price than the prevailing price across national markets; commencing
- 9 an auction with a time duration of greater than zero and less than ten seconds in which
- improved bids or offers are received; and at the termination of said auction, mating with
- 11 contra market orders or bids according to an allocation at the best price first and within
- each price level by time of receipt, with a share of any allocation remaining at the best
- price level of said market participant commencing said price-improvement auction
- 14 reserved to said market participant.